

## CLAIMS

What is claimed is:

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1. A query assist tool for assisting a user in creating and/or editing a query statement, the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the user interface comprising:

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- a) means for visually displaying a search condition of a query statement in a first display area; and
- b) means for visually selecting two or more predicates of the displayed search condition for grouping.

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2. The query assist tool of claim 1, wherein the selecting means further comprises means for highlighting the two or more predicates.

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3. The query assist tool of claim 1, further comprising means responsive to selection of the two or more predicates for indicating the grouping in the first display area.
4. The query assist tool of claim 3, wherein the means for indicating the grouping further comprises one or more of the group consisting of: indenting the grouped

predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol.

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5. The query assist tool of claim 1, further comprising means for confirming selection of the two or more predicates for grouping.

6. The query assist tool of claim 5, wherein the means for indicating grouping are responsive to selection confirmation.

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7. The query assist tool of claim 5, wherein the confirming means further comprises one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing.

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8. The query assist tool of claim 5, wherein activation of the confirming means causes a model instance to be updated with the selected grouping.

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9. The query assist tool of claim 3, further comprising means for selecting one or more of grouped predicates for ungrouping.

10. The query assist tool of claim 9, further comprising means, responsive to grouped predicate selection, for removing the indications of grouping from the first display area.
- 5 11. The query assist tool of claim 9, further comprising means for confirming selection of the one or more grouped predicates for ungrouping.
12. The query assist tool of claim 11, further comprising means responsive to selection confirmation for removing the indications of the grouping from the first display area.
- 10 13. The query assist tool of claim 11, wherein the confirming means further comprises one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing.
- 15 14. The query assist tool of claim 11, wherein activation of the confirming means causes a model instance to be updated with the selected ungrouping.
- 20 15. The query assist tool of claim 1, wherein the means for displaying the search condition further comprises means for displaying each search predicate in a separate line of the first display area.

16. The query assist tool of claim 1, wherein displaying the search condition further comprises means for displaying each operator in a separate line of the first display area.

5 17. The interface of claim 1, wherein the interface is further coupled to an application interface for receiving a query statement from an application for populating the interface.

10 18. A method for assisting a user in creating and/or editing a query statement, the method utilizing a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the method comprising the steps of:

15 a) visually displaying a search condition of a query statement in a first display area of the user interface; and  
b) visually selecting two or more predicates of the displayed search condition for grouping.

20 19. The method of claim 18, wherein the selecting step further comprises the step of highlighting the two or more predicates.

20. The method of claim 18, further comprising the step of visually indicating the grouping in the first display area in response to selection of the two or more predicates.

5 21. The method of claim 20, wherein the step of indicating the grouping further comprises one or more of the group consisting of: indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol.

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22. The method of claim 18, further comprising the step of confirming selection of the two or more predicates for grouping.

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23. The method of claim 22, wherein the step of indicating grouping is responsive to selection confirmation.

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24. The method of claim 22, wherein the confirming step further comprises one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

25. The method of claim 22, where confirmation causes a model instance to be updated with the selected grouping.

26. The method of claim 20, further comprising the step of selecting one or more of grouped predicates for ungrouping.

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27. The method of claim 26, further comprising the step of means removing the indications of grouping from the first display area in response to the step of selecting grouped predicates.

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28. The method of claim 26, further comprising the step of confirming selection of the one or more grouped predicates for ungrouping.

29. The method of claim 28, further comprising the step of removing the indications of the grouping from the first display area in response to selection confirmation.

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30. The method of claim 28, wherein the confirming step comprises one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

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31. The method of claim 28, where confirmation causes a model instance to be updated with the selected ungrouping.

32. The method of claim 18, wherein the step of displaying the search condition further comprises the step of displaying each search predicate in a separate line of the first display area.
- 5 33. The method of claim 18, wherein the step of displaying the search condition further comprises the step of displaying each operator in a separate line of the first display area.
- 10 34. The interface of claim 18, further comprising the step of receiving a query statement from an application for populating the interface.
- 15 35. An article of manufacture comprising a computer program carrier readable by a computer and embodying one or more instructions executable by the computer, the computer program providing a query assist tool for assisting a user in creating and/or editing a query statement, the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the user interface comprising:
- 20 a) program instructions for visually displaying a search condition of a query statement in a first display area of the user interface; and
- b) program instructions for visually selecting two or more predicates of the displayed search condition for grouping.

36. The article of manufacture of claim 35, wherein the program instructions for selecting further comprises program instructions for highlighting the two or more predicates.
- 5 37. The article of manufacture of claim 35, further comprising program instructions for visually indicating the grouping in the first display area in response to selection of the two or more predicates.
- 10 38. The article of manufacture of claim 37, wherein the program instructions for indicating the grouping further comprises program instructions for one or more of the group consisting of: indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol.
- 15 39. The article of manufacture of claim 35, further comprising program instructions for confirming selection of the two or more predicates for grouping.
40. The article of manufacture of claim 39, wherein the program instructions for indicating grouping are responsive to selection confirmation.
- 20 41. The article of manufacture of claim 39, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area,



entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

5           42.    The article of manufacture of claim 39, further comprise program instructions for causing a model instance to be updated with the selected grouping upon confirmation.

10           43.    The article of manufacture of claim 37, further comprising program instructions for selecting one or more of grouped predicates for ungrouping.

15           44.    The article of manufacture of claim 43, further comprising program instructions for removing the indications of grouping from the first display area in response to the step of selecting grouped predicates.

          45.    The article of manufacture of claim 43, further comprising program instructions for confirming selection of the one or more grouped predicates for ungrouping.

20           46.    The article of manufacture of claim 45, further comprising program instructions for removing the indications of the grouping from the first display area in response to selection confirmation.

47. The article of manufacture of claim 45, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

48. The article of manufacture of claim 45, further comprising program instructions for updating a model instance with the selected ungrouping upon confirmation.

49. The article of manufacture of claim 35, wherein the program instructions for displaying the search condition further comprise program instructions for displaying each search predicate in a separate line of the first display area.

50. The article of manufacture of claim 35, wherein the program instructions for displaying the search condition further comprise program instructions for displaying each operator in a separate line of the first display area.

51. The article of manufacture of claim 35, further comprising program instructions for receiving a query statement from an application for populating the interface.